Software Development

Emphasis
Associate of Applied Science (AAS) Degree

Program Information
The Anoka Technical College Associate in Applied Science (AAS) degree in Information Technology with an emphasis in Software Development is a 72-credit program designed to prepare graduates to successfully compete for high-paying, rewarding careers in IT fields with the highest demand, both today and in the future.

The Software Development Associate of Applied Science (AAS) degree emphasis provides students with the knowledge to become part of a software application team that builds applications to solve industry needs. Students develop both the front-end graphical user interface (GUI) as well as the software code and back-end database for business applications. Students are given the opportunity to collaborate in a team environment for development and practice documenting and critiquing code. Collaboration and communication are emphasized as part of the software development coursework.

The program requirements were determined through consultation with employers, those working in the industry, technical training professionals, and those currently seeking training and retraining for IT careers.

The IT degree has an initial curriculum in career areas of concentration:
• Network Management and Security
• Software Development
• Web Design and Development

This unique program allows technical specialization in Software Development while the common core courses and required electives from other specializations build the broad IT foundation needed to understand the terminology and methodologies of other IT specialties in the workplace. The Software Development Associate of Applied Science (AAS) degree includes general education credits, which broaden knowledge beyond what is required in the technical field and places the student on track for future managerial positions.

Program Learning Outcomes
By completing this program, students will achieve the following learning outcomes.
1. Apply critical thinking skills in the identification, analysis and resolution of information technology problems.
2. Exhibit interpersonal skills and a professional attitude while working in an information technology environment.
3. Clearly express ideas and information in written and spoken form.
4. Analyze, design and document system specifications to meet client needs.
5. Apply project management techniques to solve business problems.
6. Collaborate with a team to design and develop customer software-based solutions and integrate them into the user environment.
7. Apply logical reasoning to a problem.

Course Prerequisites
Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a “C” or better.

- BDAT 1005, ITEC 1003, ITEC 1011, ITEC 1016, and TLIT 1005 are first semester courses and prerequisite to other courses in this major.
- ENGL 2105 prerequisites ENGL 0102 or ENGL 0960 and READ 0900 or READ 0960 or appropriate test score.
- Goal Area 4 could require extra math courses or appropriate scores

Graduation Requirements
All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities
To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:
• Minnesota Transfer
• Anoka Technical College transfer student

Industry Information
Anoka Technical College Information Technology graduates will be specialists in their area of emphasis and will also have a broad base of foundational knowledge from the common core courses that span the three emphasis areas. Professional standards, proper methodology and project management will be emphasized throughout the courses.

Wages/Outlook/Advancement
Wage information is available from the Minnesota Department of Employment and Economic Development

Start Dates
Fall Semester………………………………August, October
Spring Semester…………………………..January, March

General Education/MnTC Requirements: 15 Credits
Fifteen (15) general education credits of Minnesota Transfer Curriculum (MnTC) are required from three different goal areas. Student is required to take one transferable course from MnTC Goal Area 4 and the following courses:

☐ ENGL 2105 Business and Technical Writing………………..4
☐ PHIL 1200 Technology, Ethics and Society…………………3
☐ General Education/MnTC ……………………………………8

Note: MnTC credits are not listed in your program sequence plan. Please see your faculty advisor or enrollment services for help in planning when to complete your MnTC credits.
# Software Development Emphasis

## Associate of Applied Science (AAS) Degree

### Program Sequence

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDAT 1005 Data Analysis Fundamentals</td>
<td>2</td>
</tr>
<tr>
<td>ITEC 1003 Networking Fundamentals</td>
<td>2</td>
</tr>
<tr>
<td>ITEC 1011 Programming Logic &amp; Design</td>
<td>4</td>
</tr>
<tr>
<td>ITEC 1016 Web Programming Technologies</td>
<td>4</td>
</tr>
<tr>
<td>TLIT 1005 Technology Fundamentals</td>
<td>3</td>
</tr>
</tbody>
</table>

After completing the 15 credit core curriculum, IT students work with a faculty advisor to plan their course sequence.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITEC 1025</td>
<td>Project Management</td>
<td>4</td>
</tr>
<tr>
<td>ITEC 1035</td>
<td>Documentation Standards</td>
<td>2</td>
</tr>
<tr>
<td>ITEC 2105</td>
<td>JAVA Programming</td>
<td>4</td>
</tr>
<tr>
<td>ITEC 2120</td>
<td>DB Design &amp; SQL</td>
<td>4</td>
</tr>
<tr>
<td>ITEC 2311</td>
<td>User Interface Experience</td>
<td>4</td>
</tr>
<tr>
<td>ITEC 2340</td>
<td>Scripting languages</td>
<td>4</td>
</tr>
<tr>
<td>ITEC 2520</td>
<td>Mobile Application Development</td>
<td>4</td>
</tr>
<tr>
<td>ITEC 2600</td>
<td>Application Development</td>
<td>4</td>
</tr>
<tr>
<td>ITEC 2601</td>
<td>Database Application Development</td>
<td>4</td>
</tr>
<tr>
<td>ITEC 2700</td>
<td>Artificial Intelligence</td>
<td>4</td>
</tr>
<tr>
<td>ITEC 2901</td>
<td>Integrated Capstone Project</td>
<td>4</td>
</tr>
</tbody>
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### Faculty Contact

Gerard Kne

763-576-4044

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

Also see AAS degrees and/or diplomas in: Business Data Analyst, Network Management and Security, Software Development, Web Design & Development, and IT Support certificate